

## Johnson County

### Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

10/7/14

34 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Johnson County economy.<sup>1</sup>

These 34 sectors have a total direct output of approximately \$2510 million and support 3,346.7 jobs in Johnson County. Running the model for all 34 sectors simultaneously produces the following results:

Agriculture Contribution in Johnson Co						
Impact Type <sup>2</sup>	Employment	% Employment	Total Value Added <sup>3</sup>	% of Gross Regional Product <sup>4</sup>	Output <sup>5</sup>	% of Gross Regional Product
Direct Effect	3,346.7	1%	416,223,718.3	1%	2,509,697,336.1	6%
Indirect Effect	2,690.8	1%	302,325,697.1	1%	489,245,647.4	1%
Induced Effect	1,978.9	0%	168,047,798.1	0%	256,836,027.6	1%
Total Effect	8,016.4	2%	886,597,213.5	2%	3,255,779,011.1	8%

As shown in the above table, agriculture, food, and food processing supports 8,016.4 jobs, or 2% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$3256 million, roughly 8% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 34 agriculture, food, and food processing sectors is approximately \$887 million, or 2% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 2% of the total economy.

<sup>1</sup> Article on building a contribution analysis in IMPLAN that avoids double counting:

[http://www.implan.com/index.php?option=com\\_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70](http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70)

<sup>2</sup> Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

<sup>3</sup> Value added = labor income + indirect business taxes + other property type income.

<sup>4</sup> GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

<sup>5</sup> Output = intermediate inputs + value added.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

In the top ten by employment, Support activities for agriculture and forestry is the top employer in the agriculture industry with 528.7 employees. This table also shows the amount of jobs that are created by the agriculture industry in Johnson County.

Description	Total Employment	Total Output
Support activities for agriculture and forestry	528.7	21,101,023.5
Seasoning and dressing manufacturing	496.1	327,769,683.6
Wholesale trade businesses	467.7	110,695,766.7
Food services and drinking places	346.0	21,172,527.0
Bread and bakery product manufacturing	318.1	63,402,088.0
Real estate establishments	287.6	39,722,851.0
Fats and oils refining and blending	286.3	1,328,913,873.0
Soft drink and ice manufacturing	278.2	216,555,442.8
Management of companies and enterprises	272.0	59,003,276.0
Confectionery manufacturing from purchased chocolate	244.5	107,892,436.2

The Fats and oils refining and blending industry directly contributes approximately \$1329 million to Johnson County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

Description	Total Employment	Total Output
Fats and oils refining and blending	286.3	1,328,913,873.0
Seasoning and dressing manufacturing	496.1	327,769,683.6
Soft drink and ice manufacturing	278.2	216,555,442.8
Wholesale trade businesses	467.7	110,695,766.7
Confectionery manufacturing from purchased chocolate	244.5	107,892,436.2
Other animal food manufacturing	43.4	73,833,790.8
All other food manufacturing	198.9	69,558,917.9
Bread and bakery product manufacturing	318.1	63,402,088.0
Flour milling and malt manufacturing	42.7	60,446,728.4
Other industrial machinery manufacturing	136.8	60,199,375.8

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture sector and the output they contributed to Johnson County's economy.

Description	Employment	Output
Oilseed farming	83.39	9,412,082.67
Grain farming	182.02	7,420,572.28
Vegetable and melon farming	0.86	330,593.59
Fruit farming	0.17	75,836.38
Greenhouse, nursery, and floriculture production	50.84	16,721,868.52
All other crop farming	15.17	3,881,690.98
Cattle ranching and farming	112.56	12,361,741.07
Dairy cattle and milk production	10.85	1,541,587.59
Animal production, except cattle and poultry and eggs	87.77	3,118,463.99
Commercial logging	1.43	120,812.82
Commercial hunting and trapping	1.05	191,310.75
Support activities for agriculture and forestry	528.67	20,247,755.05
Dog and cat food manufacturing	10.04	13,740,847.59
Other animal food manufacturing	43.44	72,718,177.80
Flour milling and malt manufacturing	42.68	60,410,068.51
Soybean and other oilseed processing	4.97	10,180,016.52
Fats and oils refining and blending	286.33	1,328,107,910.16
Confectionery manufacturing from purchased chocolate	244.55	104,819,915.77
Nonchocolate confectionery manufacturing	2.20	907,308.76
Animal (except poultry) slaughtering, rendering, and processing	43.88	19,380,449.30
Poultry processing	6.81	2,922,925.23
Bread and bakery product manufacturing	318.06	61,194,828.03
Cookie, cracker, and pasta manufacturing	71.84	32,116,695.40
Tortilla manufacturing	35.74	8,038,813.59
Snack food manufacturing	8.57	6,250,525.95
Seasoning and dressing manufacturing	496.07	324,280,517.58
All other food manufacturing	198.92	68,818,450.93
Soft drink and ice manufacturing	278.19	209,523,849.49
Breweries	4.49	4,056,028.37
Wineries	2.55	748,590.35
Distilleries	4.78	4,497,807.50
Paper mills	11.66	7,508,457.18
Farm machinery and equipment manufacturing	19.27	10,464,932.44
Other industrial machinery manufacturing	136.84	57,552,978.52
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All 105 counties in Kansas have Implan models and agriculture contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Kansas, the retail sector was omitted.